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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named  
Inventor : Kang-Hyun Baek

Appln. No. : 10/801,940

Filed : March 16, 2004

For : SELF ASSEMBLED THREE-  
DIMENSIONAL PHOTONIC  
CRYSTAL

Docket No.: U11.12-0161

Group Art Unit: 2873

Examiner:

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I HEREBY CERTIFY THAT THIS PAPER IS BEING  
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COMMISSIONER FOR PATENTS, P.O. BOX 1450,  
ALEXANDRIA, VA 22313-2450, THIS

9 DAY OF Aug, 2004

PATENT ATTORNEY

Sir:

The patents or publications listed on the enclosed PTO Form-1449 are submitted pursuant to 37 C.F.R. § 1.97. Copies of the patents or publications cited are enclosed.

**TIME OF FILING**

The information disclosure statement is being filed:

1. X with the application or within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. In accordance with 37 C.F.R. § 1.97(b), no statement or fee is required.
2. \_\_\_\_\_ after the time period specified in paragraph 1 above, but before the mailing date of a final action under 37 C.F.R. § 1.113 or notice of allowance under 37 C.F.R. § 1.311. Therefore, in accordance with 37 C.F.R. § 1.97(c), submitted herewith is:

(check either A or B below)

- A. \_\_\_\_\_ a statement as specified in 37 C.F.R. § 1.97(e).
- B. \_\_\_\_\_ the fee set forth in 37 C.F.R. § 1.17(p) for

submission of an information disclosure statement under 37 C.F.R. § 1.97(c).

3. \_\_\_\_\_ after the mailing date of either a final action under 37 C.F.R. § 1.113 or a notice of allowance under 37 C.F.R. § 1.311, whichever occurs first, but before payment of the issue fee. Therefore, Applicant petitions for consideration and submits herewith:
- A. a statement as specified in 37 C.F.R. § 1.97(e);
  - B. the petition fee set forth in 37 C.F.R. § 1.17(p).

**STATEMENT**

(only used if No. 2(A) or No. 3 above is checked)

The person(s) signing below certify

(check appropriate paragraph)

\_\_\_\_\_ that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. § 1.97(e)(1).

OR

\_\_\_\_\_ that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. § 1.97(e)(2).

**METHOD OF PAYMENT**

  X   No fee is required.

       Attached is a check in the amount of \$       .

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123. A duplicate copy of this communication is enclosed.


Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

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FORM PTO-1449	Atty. Docket No.: U11.12-0161	Appl. No.: 10/801,940
	First Named Inventor:	
	Kang-Hyun Baek	
	Filing Date	Group Art:
	March 16, 2004	2873

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
EA						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
EB						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

EC	S. Noda, K. Tomoda, N. Yamamoto, A. Chutinan, "Full three-dimensional photonic bandgap crystals at near-infrared wavelengths", <i>Science</i> , vol. 289, pp. 604-606, Jul., 2000.
ED	Y.A. Vlasov, X.-Z. Bo, J.C. Sturm, D.J. Norris, "On-chip natural assembly of silicon photonic bandgap crystals", <i>Nature</i> , vol. 414, pp. 289-293, Nov., 2001.
EE	G.H. Bogush, M.A. Tracy, C.F. Zukoski IV, "Preparation of monodisperse silica particles: Control of size and mass fraction", <i>J. Non-Crystalline Solids</i> , vol. 104, pp. 95-106, 1988.
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EG	W. Stober, A. Fink, E. Bohn, "Controlled growth of monodisperse silica spheres in the micron size range", <i>J. Colloid and Interf. Sci.</i> , vol. 26, pp. 62-69, 1968.
EH	D.W. McComb, B.M. Treble, C.J. Smith, R.M. De La Rue and N. P. Johnson, "Synthesis and characterization of photonic crystals", <i>J. Mater. Chem.</i> , vol. 11, pp. 142-148, 2001.
EI	P. Ni, P. Dong, B. Cheng, X. Li, D. Zhang, "Synthetic SiO <sub>2</sub> opals", <i>Adv. Mater.</i> vol. 13, pp. 437-441, Mar. 2001.
EJ	P. Jiang, J.F. Bertone, K.S. Hwang, V.L. Colvin, "Single-crystal colloidal multilayers of controlled thickness", <i>Chem. Mater.</i> , vol. 11, pp. 2132-2140, 1999.
EK	C.F. Blanford, R.C. Schrodin, M. Al-Daous, A. Stein, "Tuning solvent-dependent color changes of three-dimensionally ordered macroporous (3DOM) materials through compositional and geometric modifications", <i>Adv. Mater.</i> , vol. 13, pp. 26-29, Jan., 2001.

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DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>FORM PTO-1449</b>	Atty. Docket No.: <b>U11.12-0161</b>	Appl. No.: <b>10/801,940</b>
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	First Named Inventor:	
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FA						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
FB						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

FC	E. Yablonovich, Inhibited spontaneous emission in solid state physics and electronics, Phys. Rev. Lett., Vol. 58, pp. 2059-2062, 1987.
FD	O. Painter, J. Vuckovic, A. Yariv, A. Scherer, J. D. O'Brien, P. D. Dapkus, Two dimensional photonic band gap defect mode laser, Science, Vol. 284, pp. 1819-1821, 1999.
FE	E. R. Brown, O. B. McMahon, High zenithal directivity from a dipole antenna on a photonic crystal, Appl. Phys. Lett., vol. 68, pp. 1300-1302, 1996.
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FG	J. G. Fleming, S-Y. Lin, Three dimensional photonic crystal with a stop band from 1.35 to 1.95 $\mu$ m, Optics Lett., vol. 24, pp. 49-51, 1999.
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FI	Special issue of Advance Materials, Vol. 13, no 6, pg. 369, 2001.
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GA						

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GB						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

GC	B. T. Holland, C. F. Blanford, A. Stein, Synthesis of Highly Ordered Three-Dimensional Mineral Honeycombs with Macropores, Science, Vol. 281, pp. 538-540, 1998.
GD	H. Yan, C. F. Blandford, B. T. Holland, W. H. Smyrl, A. Stein, General Synthesis of Periodic Macro-porous Solids by Templated Salt Precipitation and Chemical Conversion, Chem. Mater., Vol.12, pp. 1134-1141, 2000.
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GF	D. J. Norris, Y. A. Vlasov, Chemical Approaches to Three-Dimensional Semiconductor Photonic Crystals, Advanced Materials, Vol. 13, Issue 6, pp. 371-376, 2001.
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GH	Y. Matsui, M. Ishino, T. Fujita, H. Serizawa, T. Kajiura, A novel measurement technique of loss and facet reflectivity for semiconductor optical waveguides, SPIE Vol. 651, Integrated Optical Circuit Engineering III, 1986.
GI	S. G. Johnson, J. D. Joannopoulos, Block iterative frequency domain method for Maxwell's equations in a plane wave basis, Opt. Express, Vol. 8, 173-190, 2001.
GJ	P. M. Bell, J. M. Pendry, I. Martin-Moreno, A. J. Ward, A program for calculating photonic band structures and transmission coefficients of complex structures, comput. Phys. commun., Vol. 85, pp. 306-322, 1995.
GK	K. R. Williams, R. S. Muller, Etch rates for micromachining processing, J. Microelectromechanical Systems, Vol. 5, pp. 256 -269, 1996.

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HB						

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HC	"Photonic Band Engineering in Opals by Growth of Si/Ge Multilayer Shells", by F. Garcia-Santamaria et al., Adv. Mater. 2003, 15, No. 10, pgs. 788-792.
HD	"Tuning the Properties of Photonic Films from Polymer Beads by Chemistry", by M. Egen et al., Chem. Mater: 2002, 14, pgs. 2176-2183.
HE	"Synthesis and Characterization of Monodisperse Core-Shell Colloidal Spheres of Zinc Sulfide and Silica", by K. Velikov et al., Langmuir 2001, 17, pgs. 4779-4786.
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